

IDEAS AT *Work*

COMPUTERS/HILLEL SEGAL

Tape backups a breeze with Sysgen's Smart!

Doing backups of your personal computer's hard disk can either be time-consuming, tedious and boring — or quick, efficient and automatic. But either way, it must be done.

This week I'll discuss a new program called *Smart!* that takes some of the drudgery out of the job. It's offered by Sysgen Inc., one of the companies that makes tape backup units for hard disks. "Automatic backup" has been a much-talked-about concept for several years, and Sysgen is the first to successfully bring it to market for personal computers.

Even though the new program is a breakthrough, it also has some drawbacks. But before I describe it further, let me explain why backups are so important in the first place.

There are three common causes of lost data, listed here in their order of importance:

✓ **Accidental erasure.** Everyone says "It'll never happen to me," but it eventually happens to everyone. You will inadvertently copy an old file on top of a new one, give the command to erase the wrong file, or reformat the wrong disk. It's best to just accept the fact that these errors will occasionally occur, and plan accordingly.

✓ **Mechanical failure.** Despite what the manufacturers claim, high-speed hard disk drives are notoriously unreliable. Just like any mechanical device, these units are prone to wear and tear. They have an expected "mean time between failure" that is measured in months or years, depending upon the quality of the parts and workmanship. As the units get older, regardless of their initial quality, they tend to malfunction more often.

✓ **External electrical problems.** Sudden flickers, surges or power irregularities caused by thunderstorms are the most common culprit. The result is often destroyed files or illegible data. Sometimes

end of the day.

If you use an IBM PC, XT or AT, Sysgen's *Smart!* program solves this problem beautifully. Set up to work with one of Sysgen's tape backup units, it can automatically back up your files at the same time each day, or twice a day — at say 12:30 p.m. or 6 p.m. — completely unattended.

If the computer is being used at the designated time, it will give the operator a warning beep in advance. The operator can either finish the current task before it starts or instruct the program to do the backup at a later time.

The program keeps track of the time by referring to the computer's internal clock, which is either operated by a battery or which may be set whenever the computer is turned on. Obviously, this is key to the backups taking place at the proper times. Many add-in memory boards designed for IBM PCs include battery-operated clocks.

The entire package is slick and easy to use after it's set up — it requires expert installation — and the cost for the program is included in the price of the Sysgen tape units. The units start at \$795 for 20 megabytes of backup capacity and increase in price with higher tape capacities.

A few cautions: The *Smart!* program can only be run with Sysgen equipment, and only with IBM personal computers. In testing the Sysgen Flat-Pak, a disk/tape unit with a 20 megabyte disk and 60 megabyte tape cartridge, it did not work with some computers that advertise IBM compatibility — such as the AT&T 6300 and the NCR PC. Also on the negative side, it's not possible to set it up to back up different files on different days without manual intervention. This might be helpful if you want to back up only changed files every day and then do a full backup every Friday.

Also, even though the program is easy to use and "forget about,"



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files or illegible data. Sometimes the data is not destroyed, but extraneous characters are added that cause endless problems. In this case, it's often easier to reload a backup and update the file with new transactions than to try and clean up the original file.

In all these cases, your valuable data is obviously in jeopardy. What would you do if your customer data base, accounting records, word processing documents or inventory records were suddenly destroyed? The only answer is daily backups — whether it is time-consuming, tedious, and boring.

Merely owning or having a backup tape unit is not enough. It's so easy to procrastinate or avoid the backup task altogether. To make matters worse, the backup usually needs to be done at the very time that's most inconvenient: at the

since it's automatic, you still have to remember to change tapes and occasionally make sure that the backup copies were made successfully. Usually the program will provide you with an error message if your last backup had some kind of problem, but in one of my tests everything appeared to be in order until I checked the list of backed-up files on the tape. Only at that time did an error message appear about a tape problem.

The bottom line: I'm very impressed with the Smart! program and the Sysgen equipment, but it will take some diligent effort on the part of someone in your office to make sure it always works properly. When it does, it will bring a level of comfort to any office that needs backups but lacks the time or manpower to do it every day.

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